Environmental Management System:
Hazardous Waste Management Procedure

qmul.ac.uk April 2022
# Approval Page

<table>
<thead>
<tr>
<th>Version</th>
<th>Governance Group</th>
<th>Date Approved</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>Sustainability Committee</td>
<td>15 March 2021</td>
</tr>
<tr>
<td>2.0</td>
<td>Sustainability Committee</td>
<td>1 April 2022</td>
</tr>
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</table>
Purpose
This procedure details how hazardous wastes generated across the UK and Malta campuses of Queen Mary, University of London (Queen Mary) are managed in order to:

- Address the risks and opportunities associated with the hazardous waste aspect;
- Ensure that hazardous waste documentation is stored and maintained;
- Ensure that hazardous waste is handled and stored appropriately;
- Ensure compliance with relevant environmental legislation.

Scope
This procedure covers the storage and disposal of all hazardous waste streams generated across Queen Mary's UK and Malta campuses.

Definitions (ISO14001:2015)
- Risks and Opportunities: potential adverse effects (threats) and potential beneficial effects (opportunities)
- Process: Set of interrelated or interactive activities, which transforms inputs into outputs.

Responsibilities

<table>
<thead>
<tr>
<th>Role / Position</th>
<th>Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head of Sustainability</td>
<td>Coordinates training and learning opportunities for all interested parties and relevant stakeholders on environmental compliance and risks associated with hazardous waste management.</td>
</tr>
<tr>
<td>Health and Safety Advisers and Managers</td>
<td>• Coordination of the safe storage, appropriately segregation and consignment of all laboratory generated hazardous wastes, excluding WEEE (Waste from Electrical and Electronic Equipment) across Queen Mary’s campuses and</td>
</tr>
<tr>
<td>Role / Position</td>
<td>Responsibilities</td>
</tr>
<tr>
<td>-----------------</td>
<td>------------------</td>
</tr>
<tr>
<td><strong>Facilities Manager</strong>&lt;br&gt;(Supported by the Assistant Facilities Managers)</td>
<td>- Coordination of the appropriate storage, collection, treatment and disposal of all WEEE generated across non-laboratory facilities at Queen Mary’s campuses.&lt;br&gt; - Ensure the retention of all WEEE consignment notes for a minimum period of three years.&lt;br&gt; - Collation of all WEEE data for the annual Estates Management Record (EMR) submissions.&lt;br&gt; - Ensuring that all WEEE generated across Queen Mary campuses are managed in line with relevant environmental regulations.</td>
</tr>
<tr>
<td><strong>Facilities and Resources Manager (Malta Campus)</strong></td>
<td>- Ensuring that all hazardous wastes generated across the Malta Campus are handled, stored and consigned in line with relevant regulations&lt;br&gt; - Managing of appointed hazardous waste collection services contractor and facilities service provider&lt;br&gt; - Ensuring that all hazardous waste consignment notes are kept for a minimum period of three years&lt;br&gt; - Ensuring that all clinical waste storage bins are compliant with Malta regulations and standards&lt;br&gt; - Ensuring that all clinical wastes storage bins are not accessible by unauthorised individuals</td>
</tr>
<tr>
<td><strong>Facilities and Resources Assistant (Malta Campus)</strong></td>
<td>- Supports the Facilities and Resources Manager to ensure that all hazardous waste generated across the Malta campus are managed in line with regulations</td>
</tr>
<tr>
<td>Role / Position</td>
<td>Responsibilities</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Cleaning Operatives (Malta Campus)</td>
<td>• Responsible for emptying all clinical waste receptacles</td>
</tr>
<tr>
<td></td>
<td>• Responsible for appropriately storing all clinical waste wastes generated across the Malta Campus</td>
</tr>
<tr>
<td>Senior Anatomy and Clinical Skills Technician (Malta Campus)</td>
<td>• Responsible for treating fluid chemical wastes used for teaching, laboratory demonstration and maintenance of cadaver.</td>
</tr>
<tr>
<td>Facilities Management Service Provider (Malta)</td>
<td>• Responsible for the collection, segregation and consignment of all hazardous wastes.</td>
</tr>
<tr>
<td>Porters</td>
<td>• Appropriate transfer and labelling of WEEE to the storage compound ready for collection.</td>
</tr>
<tr>
<td></td>
<td>• Appropriate transfer and labelling of non-laboratory hazardous waste.</td>
</tr>
<tr>
<td>Engineering and Estates Management Team</td>
<td>• Transfer waste fluorescent tubes to the designated coffin.</td>
</tr>
<tr>
<td>Information Technology Department</td>
<td>• Ensure that all Information Technology WEEE are appropriately stored and collected by licensed hazardous waste collection service contractors.</td>
</tr>
<tr>
<td></td>
<td>• Ensure the retention of all WEEE consignment notes for a minimum period of three years.</td>
</tr>
<tr>
<td>Departmental Laboratory Hazardous Waste Manager</td>
<td>• Ensure that all hazardous wastes generated across Queen Mary’s laboratories are appropriately stored in line with relevant environmental regulations.</td>
</tr>
<tr>
<td>Sustainability and Environment Manager</td>
<td>Responsible for the periodic audit of this procedure and associated activities against relevant regulations and ISO 14001:2015 EMS clauses and ensure that corrective actions are put in place to address any non-conformance(s).</td>
</tr>
<tr>
<td>All Lab Users</td>
<td>• Safely and appropriately, use hazardous waste receptacles to store all hazardous wastes generated across Queen Mary’s laboratories.</td>
</tr>
<tr>
<td>Queen Mary’s Environmental Associates</td>
<td>• Responsible for the review of this procedure in conjunction with all relevant stakeholders and interested parties.</td>
</tr>
</tbody>
</table>
Related Documents
This procedure is linked to:

- Queen Mary’s Environmental Policy 2021
- Queen Mary’s Environmental Sustainability Action Plan (2020-23)
- Queen Mary’s Environmental Management System (EMS) 2022
- Queen Mary’s Environmental Aspects and Impact Register 2022

Hazardous Waste Overview
Hazardous wastes have potential to cause harm to human health or the environment. Some examples of hazardous wastes include but not limited to:

- Oil contaminated wastes
- All explosive, oxidising, flammable, irritant, corrosive, toxic, carcinogenic and mutagenic substances
- All clinical wastes and eco-toxic materials
- Waste oils and materials contaminated with waste oils
- Paints, solvents, acids and alkaline solutions
- Pesticides and chemicals
- Waste electrical and electronic equipment (WEEE)
- Batteries and fluorescent tubes
- Asbestos
- Radioactive waste

Clinical Waste
Any waste consisting wholly or partly of human or animal tissue, blood or other body fluids, excretions, drugs or other pharmaceutical products, swabs or dressings, or syringes, needles or other sharp instruments, being waste which unless rendered safe may prove hazardous to any person coming into contact with it.

Any waste arising from medical, nursing, dental, veterinary, pharmaceutical or similar practices, investigation, treatment, care, teaching or research, or the collection of blood for transfusion, being waste which may cause infection to any person coming into contact with it. Some hazardous clinical waste (materials / consumable / sharps) may contain chemical contaminants or cytotoxic / cytostatic compounds.
Waste Electrical and Electronic Equipment (WEEE)
All waste consisting of electrical devices including battery powered devices and electronic and mechanical information technology, communications equipment, mobile telephones, and non-lead acid batteries generated as a result of Queen Mary’s activities are classified as WEEE.

All WEEE must be appropriately stored for treatment or disposal. The Facilities Manager (supported by the Assistant Facilities Managers) is responsible for managing the storage and disposal of all WEEEs generated across Queen Mary’s UK campus (excluding out of scope or damaged IT equipment). While the Facilities and Resources Manager (Malta Campus) supported by the Facilities and Resources Assistant is responsible for the appropriate storage and consignment of all WEEE and these wastes are collected by the appointed Facilities Services Provider.

Below is a list of typical WEEE generated across Queen Mary’s UK and Malta campuses:

- Faulty or damaged television(s)
- Faulty or damaged audio and entertainment equipment
- Dry cell batteries
- Fluorescent tubes and light bulbs (excluding vehicle light bulbs)
- Faulty refrigerators, dish washers and washing machines
- Faulty electric heating and ventilation equipment
- Faulty electric cookers and microwaves
- Faulty vacuum cleaners and jet washers
- Faulty electric kettles
- Faulty electric fans
- Faulty electric irons
- Faulty electric toasters

Hazardous Waste Producers
Any Queen Mary employee or volunteer whose activities generate waste is a waste producer. It is the responsibility of everyone at Queen Mary to ensure that any wastes they generate are safely handled, appropriately segregated, and stored in line with relevant regulations, standards, and this procedure.

Hazardous Waste Storage and Collection Locations
Any designated area within Queen Mary’s premises at which United Nations approved hazardous wastes are stored. Only designated waste collection locations must be used for the
temporary storage of hazardous wastes prior to collection for treatment or disposal. These storage locations must not be easily accessible not constitute public health and health and safety risks.

**Hazardous Waste Collection Service Contractor(s)**

Any individual or organisation that hold appropriate licences, permits and exemptions appointed by Queen Mary to:

- Provide UN approved waste storage receptacles
- Consign, handle, transport and treat wastes prior to its final disposal.

These contractors must always ensure that their processes are compliant with all relevant environmental and hazardous waste regulations and standards

**Duty of Care**

This is a requirement that all waste producers, importers, carriers, and those involved in the disposal of waste take all reasonable steps to ensure that wastes are properly segregated, described, stored, transported, and treated or safely disposed

**Consignment Note**

A consignment note must accompany all hazardous wastes removed from all of Queen Mary’s premises. All clinical and hazardous wastes (such as oily rags, vehicle oil filters and used oil) cannot be collected from Queen Mary’s premises without a duly completed consignment note. Consignment notes are legal documents that must be kept for a minimum of 3 years at the premises from which hazardous wastes are removed.

**Yellow Clinical Waste Bags**

Provided by clinical waste contractor for the storage of solid wastes, trace liquids only, and non-sharps waste. Yellow clinical waste bags are suitable for the following wastes without pre-treatment:

- Negligible / low risk biological / clinical material waste and disposable consumables contaminated by materials equivalent to Advisory Committee on Dangerous Pathogens (ACDP) Hazard Group
- Genetic Modified (GM) Class 1 Waste such as tissue/blood sample solid residues that are known to be of negligible/low infectious risk and negligible/low risk animal by-products.

The following require pre-treatment before being placed into yellow clinical waste bags:

- Pathogenic wastes - ACDP HG 2 and 3

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- Specified Animal Pathogens Order (SAPO) Class 2 and 3 waste
- GM Class 2 and 3 waste
- Medium-high risk biological/clinical waste
- Soils samples from unknown sources
- Plant or soil samples containing GM materials.

**Sharp Containers**

Sharp containers are used for the storage of all solid sharps waste including tips, serological pipettes, scalpels, needle sticks and syringes, microscope slides, glass Pasteur pipettes, small glass vials / ampoules (empty or trace liquid contamination).

- Yellow lidded sharps bins are used for non-blood containing infectious materials
- Orange lidded sharps bins are used for blood/phlebotomy related sharps (blood contact > 5% w/w)
- Purple lidded sharp bins are used for significant contaminated sharps (blood contact > 5% w/w), cytotstatic and cytotoxic contaminated sharps.

Sharps containers are suitable for the following wastes without pre-treatment; Negligible / low risk biological / clinical contaminated sharps waste equivalent to ACDP Hazard Group and GM Class 1 Waste. As well as the following wastes following validated pre-treatment, Sharps contaminated with medium to high risk infectious biological/ clinical materials

**Waste Oil Containers**

Waste oils are hazardous, and all waste oil must be stored in marked leak-proof compliant containers within an appropriate bund.

**Oil Contaminated Wastes**

Oil contaminated materials must be appropriately stored and disposed as hazardous waste. Oil contaminated wastes must be segregated from other waste streams.

**Hazardous Waste Management Process (Excluding Laboratories)**

1. Departments, other than laboratories, that generate hazardous wastes are expected to contact the estates helpdesk to arrange for the collection of these wastes; alternatively, they can log their request via Ivanti (Queen Mary’s Estates Help Desk portal)
2. It is the responsibility of the waste producer to provide details of:
   a. the wastes location
   b. type of waste
c. approximate or actual quantity
d. Additional description from the material safety data sheets (MSDS)

3. Porters label, collect and transfer these wastes to the designated hazardous waste storage location

4. Hazardous wastes is stored within the hazardous waste bins at the closest hazard waste compound waste compound

5. The Facilities Manager or designated Officer arranges for the waste to be collected by a licensed hazardous waste collection service contractor based on contractual agreement

6. Fully completed consignment notes must accompany the removal of all hazardous wastes.

7. On collection of the waste, the waste contractor must provide a consignment note with parts A to D completed, which is signed by a Waste Porter and an employee of Queen Mary appointed hazardous waste collection service contractor.

8. Queen Mary’s hazardous waste collection service contractors must send quarterly hazardous waste returns to the Facilities Manager.

9. The consignment notes and hazardous waste quarterly returns must be kept for a minimum period of three years.

All clinical wastes generated across our Malta campus are consigned directly from the respective laboratories by the appointed Facilities Service Provider or by Gozo General Hospital.

**Fluorescent Tubes**

1. The Estates Management Team is responsible for transferring waste fluorescent tubes to the designated coffin.

2. Once a fluorescent tube has been replaced, the old tube is taken to the waste compound and stored in a coffin, which has space.

3. Once the coffins are full, the maintenance engineers let the Facilities Manager know they ready for collection.

4. The Facilities Manager arranges collection with a licensed waste contractor.

5. The coffin is collected and replaced by the contractor on request by the Facilities Manager.

6. On collection of the fluorescent tubes, the waste contractor must provide a consignment note with parts A to D completed, which is signed by a waste porter and Queen Mary appointed hazardous waste collection service contractor.

7. Queen Mary’s hazardous waste collection service contractors must send quarterly hazardous waste returns to the Facilities Manager.
8. The consignment notes and hazardous waste quarterly returns must be kept for a minimum period of three years.

This waste stream is not applicable to our Malta Campus.

**WEEE**

1. All departments that generate WEEE are expected to contact the Estates and Facilities Helpdesk to arrange for its collection
2. The waste producer provides details of the location, type and quantity of WEEE
3. The porters arrange to collect the waste and transfer it to the WEEE waste store
4. The Facilities Manager arranges for the WEEE to be collected by a licensed waste contractor as and when required, providing details of the types and quantities
5. All WEEE disposed as hazardous must be accompanied with consignment notes from the waste management supplier.
6. Fully completed consignment notes must accompany the removal of all hazardous wastes.
7. Queen Mary’s hazardous waste collection service contractors must send quarterly hazardous waste returns to the Facilities Manager.
8. The consignment notes and hazardous waste quarterly returns must be kept for a minimum period of three years.

All WEEE generated across the Malta Campus are collected by the appointed Facilities Management Service Provider.
The process flow chart below details how we manage hazardous waste streams:

**Batteries**

1. Battery boxes are located in various locations
2. Once the box is full, the bags within are collected on request by the porters and transported to the post room.
3. The battery bin is collected by the battery waste collection service contractor on request from the Facilities Manager.
4. Accompanying waste transfer notes are kept by the Facilities Manager for a minimum period of three years.
Hazardous Chemical Wastes
Hazardous chemical waste includes but is not limited to laboratory chemicals, solvents - stocks and dilutions, residues from reactions, prepared samples from teaching laboratories, concentrated acids and bases, pump and mineral oils etc.

Packaging
Proprietary chemicals should be retained in their original packaging, segregated into their appropriate hazard group (e.g., oxidising, corrosive, flammable etc.) and placed into secondary containment.

Solvent waste should be stored in a compatible robust, leak proof container (e.g., HDPE or Glass Winchester). If a recycled solvent container is to be used it is essential that it is thoroughly rinsed and all previous labelling must be removed before adding waste solvent.

Labelling
Waste containers must be labelled with the following information.

- Name: Who is depositing the waste (full name, not initials)
- Contact No: Office or lab ext. number
- Group/Location: Your group and lab number
- Date: Date of deposit into waste store
- Contents: Exact chemical name(s) – no acronyms
- pH: Where required
- Hazard properties: Indicate applicable symbol(s)

The Figures below show a sample of laboratory waste label

| Name: .................................................................................................................. |
| Contact No: ........................................................................................................... |
| Group / Location: .................................................................................................. |
| Date: ...................................................................................................................... |
| Contents: ................................................................................................................. |
| ............................................................................................................................. |
| ............................................................................................................................. |
| pH: .......................................................................................................................... |
| Hazardous properties: |

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Unknown Items
It is not possible for both Health and Safety Directorate (HSD) and non-Health and Safety Directorate managed stores to accept unknown waste, as we are unable to transfer this to our Hazardous Waste Contractor. The HSD must be contacted for further advice and guidance on the safe storage and disposal of any unknown chemical wastes.

It is the responsibility of laboratory users to ensure that all items are clearly classified and labelled.

Transport
All waste must be transported within campus boundaries in a suitably sized bund trolley to contain leaks and prevent items falling. A suitable spill kit and PPE should be available during transport. Transport of waste is to be performed by two people so that in the event of an incident, assistance can be summoned and the area contained.

Hazardous chemical / solvent waste must not be transported on public roads in vehicles or by public transport. Hence, always arrange for a deposit within your campus boundaries.

Non-HSD Managed Chemical Wastes
There are departmental hazardous chemical and solvent waste stores that are directly managed by some Queen Mary’s Schools / Institutes. In such cases, the local responsible person must ensure that:

- All waste is correctly labelled
- Segregated and stored according to hazard properties
- An inventory of waste within the store is maintained
- Waste is not held for more than 12 months
- Waste forms are correctly completed and collection arranged via HSD.

Across our Malta campus, all chemical wastes are treated by the Senior Anatomy and Clinical Skills Technician before these are consigned by the appointed Facilities Management Services Provider.
Clinical Waste
Clinical wastes generated across Queen Mary's three main UK Campuses are consigned by licenced hazardous waste collection service contractor. Currently these wastes are collected three times weekly from the designated clinical waste storage locations. There are:

- Four locations across the Mile End Campus
- Two locations across the Whitechapel Campus and
- Two locations across the Charterhouse Square Campus

The clinical waste collection service contractor appointed by Queen Mary delivers clinical waste receptacles to designated location across these three Campuses on a bi-monthly basis. This contract, whenever required delivers clinical waste consumable as well as carry out quarterly cleaning and disinfection of the United Nations (UN) approved clinical waste storage bins across these three campuses. There is an annual contract review conducted by our Health and Safety Directorate (HSD) with PHS (Queen Mary’s Clinical Waste Collection Service Contractor).

The processes below must be followed to ensure that clinical wastes are safely handled, appropriately segregated and correctly consigned:

1. Hazardous clinical waste must be correctly segregated and packaged in the appropriate coded/labelled yellow clinical waste bag / sharp bin according to the type of waste and appropriate waste disposal route (these are supplied by Queen Mary's current clinical waste collection service contractor).

2. Where the appreciate European Waste Codes (EWC) are not pre-printed on the bag / container, these must be correctly annotated.

3. Any incorrectly coded or labelled clinical waste receptacles must NOT be used to store clinical wastes (receptacles not supplied by Queen Mary's clinical waste collection service contractor).

4. To reduce manual handling risks to the staff of Queen Mary’s appointed clinical waste collection service contractor, yellow clinical waste bags must NOT be filled with more than 5 kg (approx.) weight or not be more than three-quarter full.

5. Correctly packaged hazardous waste bags (tied with the designated coloured cable tie identifying the originating department) and sharp bins (tied with the appropriate coloured cable tie for identification) must be transported safely to the designated yellow clinical waste wheelie bin, awaiting uplift.

6. Designated UN approved clinical waste storage bins must be used to store all sharp containers. Sharp containers must not be placed with clinical waste bags or wrapped within yellow clinical waste bags or other bags.
7. All UN approved clinical waste storage bins must be kept locked and annotated (e.g. attach a laminated sheet with information onto the bin) with:
   a. Queen Mary’s clinical waste account number
   b. Department / School / Institute name,
   c. Local contact name and Queen Mary telephone number
   d. These UN approved clinical waste bins must be appropriately labelled with infectious transport label attached (if no longer is available, the HSD’s Clinical Waste Lead should be contacted for a label).

8. Any deficiencies to the service or defects to facilities (e.g., to bins) should be immediately noted to HSD Clinical Waste Lead.

9. Queen Mary’s appointed clinical waste collection service contractor uplifts all correctly packaged and labelled hazardous clinical and clinical-related waste that are deposited in the UN approved clinical waste storage bins for treatment and disposal.

10. Queen Mary appointed clinical waste collection service contractor supplies all consumables (yellow clinical waste bags, cable ties and various sized sharp bins) that are used to package hazardous clinical wastes across Queen Mary’s UK campuses.

11. Consignment notes and quarterly hazardous waste returns are retained for a minimum period of three years by the designated Health and Safety Adviser / Manager.

Across our Malta Campus, the clinical wastes are stored within the laboratories and consigned by the appointed Facilities Management Service Provider.

**High Efficiency Particle Absorption (HEPA) Filters**

Air discharged from a Microbiological Safety Cabinet (MSC) to atmosphere passes through a High Efficiency Particle Absorption (HEPA) filter in order to remove contaminants. Other Local Exhaust Ventilation (LEV) equipment may also contain HEPA filters (e.g., fume cupboards used with nano-materials, clean rooms with clean air extraction systems, bench top glove boxes used for preparation of cytotoxic drugs).

Other filters than HEPAs from LEV systems (e.g., charcoal filters from re-circulating fume cupboards) that would also need to be treated as hazardous waste as they also would trap contaminants.

Depending on the nature of the contaminant, safe decontamination and final disposal procedures for HEPA filters must be in place to ensure the health and safety of the users, maintenance / cleaning staff, service engineers and waste disposal contractors.
Heads of laboratory groups or lab managers are responsible for ensuring all filters are disinfected or pre-treated to inactivate or seal any contaminants, removed safely, packaged for final disposal by the appropriate route.

HEPA filters are currently not applicable to our Malta campus.

**Radioactive Wastes**

Queen Mary’s Health and Safety Directorate is responsible for coordinating and managing all radioactive wastes generated across its UK campuses as well as ensure compliance with all relevant regulations and standards.

All radiation working areas in which sources of ionising radiation are used, are designated according to the potential health hazard of the work carried out in the area. Separate assessments are made in terms of external and internal hazards.

All records for the use of radioactive sources must be kept on the appropriate campus Queen Mary’s ISOSTOCK computer management database. Paper records are not acceptable as a record.

All radiation workers and/or Radiation Protection Supervisor (RPS) must ensure that source delivery, holding stocks, usage, and disposal records are kept up to date. ISOSTOCK records must be correct by the day. Entries of all new stock should include the appropriate Project Approval Reference code at the requisition / authorisation stage. All stocks must be associated with a current member of Queen Mary staff.

This waste stream is currently not applicable to our Malta campus.

**Disposal of Radioactive Wastes**

Radioactive materials waste is managed by utilisation of the ISOSTOCK software data system by departmental Radiation Protection supervisors (RPSs) and authorised lab users for radioactive materials receipt, use, accumulation and final disposal or decay, in line with the Environmental Agency permits and management documents for each campus and their project approvals for the work.

Accumulation and activity limits are identified in ISOSTOCK to warn RPSs, lab users and the Queen Mary Radiation Protection Officer (RPO) of approaching limits and to plan accordingly.
Statutory Annual Pollution Inventories are submitted to the EA by the RPO and EA Inspections occur annually or bi-annually which include radioactive waste procedures and facilities. Internal radiation inspections are conducted annually by the appointed consultant Radiation Protection Adviser (RPA) / Radiation Waste Adviser (RWA).

Aqueous liquid waste is disposed via designated drains within the radiation laboratories. Zero activity decayed solid waste is then disposed into domestic waste, as long as no other hazardous property category exists. Solid waste with longer half-lives and organic liquid waste is accumulated within designated accumulation waste stores and then arranged for disposal within the Permit time limits, by high temperature incineration at the designated addresses in the Permit via an authorised radiation waste company with EA Permits, upper tier carrier status and Dangerous Goods Transport compliance accreditation.

The RPO utilises a licenced radioactive waste collection service contractor which results in incineration at the permitted facilities. Consignment Notes and Hazardous Waste Transfer Notes and final Destruction Certificates are retained by the RPS and RPO and ISOSTOCK updated accordingly.

Naturally, Radioactive Materials (NORM) waste is accumulated and handled similar to above but with local records and flexible accumulation time periods. The legislation does allow for NORM disposals into domestic waste up to certain limits, but Queen Mary has chosen to use disposals via an authorised radiation waste company to avoid environmental harm and exposure.

Storage for accumulation and decay prior to disposal should only be in the designated campus radiation waste accumulation stores. The generation of solid waste is minimised by:

- Using the very minimum amount of radioactivity necessary for a given experiment.
- Storage of short-lived isotopes for (physical) decay, subject to EA authorisation.

**Annual Returns**

The RPO is responsible for ensuring that the required annual returns are made to the Environment Agency and other regulatory bodies, including the

- Annual Pollution return for Open Sources
- Return and updates of changes for other sources

The returns are required for the previous calendar year during the first month of the following calendar year. RPS(s) must ensure that all records are up to date at the end of each calendar year and the RPO promptly informed of any potential discrepancies in the records.
Contact the RPO for information about the safe storage and disposal of radioactive wastes. Further details are within the radiation local rules for each designated radiation area and via the Health and Safety Directorate.
## Hazardous Waste Inventory

The table below summarises the commonly occurring hazardous wastes generated across Queen Mary’s campuses.

<table>
<thead>
<tr>
<th>Waste Stream</th>
<th>EWC Code</th>
<th>Waste Carrier</th>
<th>Reg. Certificate</th>
<th>Expiry Date</th>
<th>Disposal Facility</th>
<th>Site License / Permit / Exemption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Wastes</td>
<td>180103 180109 (Cytotoxic)</td>
<td>PHS</td>
<td>CBDU289381</td>
<td>16 May 2022</td>
<td>PHS Wickford, Clinical Waste Transfer Station, Fulmer Way, Wickford, Essex, SS11 8ZB</td>
<td>LP3299NC/V002</td>
</tr>
<tr>
<td>Sharps Waste</td>
<td>180103 180104 (Human)</td>
<td>PHS</td>
<td>CBDU289381</td>
<td>16 May 2022</td>
<td>PHS Wickford, Clinical Waste Transfer Station, Fulmer Way, Wickford, Essex, SS11 8ZB</td>
<td>LP3299NC/V002</td>
</tr>
<tr>
<td>Sharps Waste</td>
<td>180103 180202 (Animal)</td>
<td>PHS</td>
<td>CBDU289381</td>
<td>16 May 2022</td>
<td>PHS Wickford, Clinical Waste Transfer Station, Fulmer Way, Wickford, Essex, SS11 8ZB</td>
<td>LP3299NC/V002</td>
</tr>
<tr>
<td>Sharps Waste</td>
<td>180103 180108 (Cytostatic)</td>
<td>PHS</td>
<td>CBDU289381</td>
<td>16 May 2022</td>
<td>PHS Wickford, Clinical Waste Transfer Station, Fulmer Way, Wickford, Essex, SS11 8ZB</td>
<td>LP3299NC/V002</td>
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<tr>
<td>WEEE</td>
<td>200135</td>
<td>CDL</td>
<td>CBDU107046</td>
<td>1 June 2022</td>
<td>CDL House, Davy Road, Runcorn, WA7 1PZ</td>
<td>EPR/BB3505UA</td>
</tr>
<tr>
<td>Batteries</td>
<td>200133</td>
<td>European Recycling Company - Ecobat / G&amp;P</td>
<td>CBDU74463</td>
<td>13 December 2024</td>
<td>Ecobat, WS10 8JR - sorted into the different chemistries for onward recycling to one of the companies</td>
<td>EPR/DB3704FG</td>
</tr>
<tr>
<td>Waste Stream</td>
<td>EWC Code</td>
<td>Waste Carrier</td>
<td>Reg. Certificate</td>
<td>Expiry Date</td>
<td>Disposal Facility</td>
<td>Site License / Permit / Exemption</td>
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<td>-----------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Fluorescent Tubes</td>
<td>200121</td>
<td>Electrical Waste Recycling Group</td>
<td>CBDU166985</td>
<td>6 April 2023</td>
<td>Electrical Waste Recycling Group, School Lane, Huddersfield, HD5 0JS</td>
<td>WEE/ME0006ZT/ATF EPR/QP3034KA/V003</td>
</tr>
<tr>
<td>Discarded equipment containing HCFC</td>
<td>160211</td>
<td>PHS</td>
<td>CBDU289381</td>
<td>16 May 2022</td>
<td>PHS Wickford, Clinical Waste Transfer Station, Fulmer Way, Wickford, Essex, SS11 8ZB</td>
<td>LP3299NC/V002</td>
</tr>
<tr>
<td>Soiled Nappy Waste from Queen Mary Nursery</td>
<td>180104</td>
<td>PHS</td>
<td>CBDU289381</td>
<td>16 May 2022</td>
<td>PHS Wickford, Clinical Waste Transfer Station, Fulmer Way, Wickford, Essex, SS11 8ZB</td>
<td>LP3299NC/V002</td>
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<td>All Hazardous waste streams</td>
<td></td>
<td>FM Core Limited^</td>
<td>GBR/12/015129/21</td>
<td>31 July 2022</td>
<td>Wasteserv Malta Ltd in Xewkija Gozo</td>
<td>EP 0022/21 (Expiry Date 12 October 2025)</td>
</tr>
</tbody>
</table>

^ Valley Mansions, Level 1, Msida Valley Road, Birkirkara, Malta, BKR 9023
Monitoring

Consignment notes checked to ensure that these legal documents contain:

- Full description of the hazardous waste
- Details of how the waste is packaged
- Quantity; place date and time of transfer
- Name and address of both parties
- Details of the permit (or exemption) of the person receiving the waste
- The EWC code for the waste
- The correct Standard Industrial Classification (SIC) code for the producer
- Statement confirming the waste hierarchy has been applied.

Documented Information

All documented information relating to the disposal of the waste streams covered by this process are held by the Facilities Manager, Estates and Facilities and the Health and Safety Directorate (for clinical, chemical and radioactive wastes) for all our UK campuses and by the Facilities and Resources Manager (Malta Campus) for our Malta campus.

Relevant documented information include:

1. Waste contractors and agreements
2. Copies of waste contractor licences
3. Consignment notes
4. Evidence of communications relating to the hazardous waste management process.

Waste Regulatory Compliance

The indicators that are used to monitor and report Queen Mary’s compliance with relevant regulations are:

- Evidence that all premises from which clinical waste and hazardous waste are removed maintain a record of consignments notes. This record must be kept for a minimum of three years.
- Evidence that all hazardous waste storage receptacles meet the UN standards.
- Evidence that all wastes are safely stored within Queen Mary’s premises.

Effects and Actions on Non-Conformance

Failure to comply with this procedure may result in:
- Non-conformance with the requirements of EcoCampus and the ISO 14001:2015 standard.
- Civil and/or criminal prosecution

Departure from this procedure is addressed in the Non-Conformance, Corrective and Preventive Action Section of our Environmental Management System.

**Version Control**

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<tr>
<th>Date</th>
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<td>1.0</td>
<td>Facilities Manager, Estates and Facilities</td>
<td>14 March 2022</td>
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EMS: Hazardous Waste Management Procedure
Document Lead: Facilities Manager
Document Owner: Director of Estates, Facilities and Capital Development
Email: sustainability@qmul.ac.uk

qmul.ac.uk